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EXAMINER	
HUANG, DAVID S	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/507,097	WIDERA ET AL.	
	Examiner	Art Unit	
	DAVID HUANG	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _06 May 2008_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _25-60_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _25-49 and 51-60_ is/are rejected.

7)☒ Claim(s) _50_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _09 September 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 5/6/2008 have been fully considered but they are not persuasive.

Applicant's argument: Lemieux does not select local clock 40 as a function of the accuracy of the clock. Indeed, nowhere does Lemieux teach or suggest a plurality of first time sources as a function a first measuring computer and selecting using the first computer, a third time source of the plurality of first sources as a function of an accuracy of the third time source.

Examiner's response: Referring to Fig. 3, the primary reference source is selected based on the quality and accuracy of different time sources, in which 3 modes are supported: GPS stratum 1 clock pulse from GPS; stratum 2 clock from the local clock module 40 in "hold-over mode"; and stratum 3E (enhanced) clock from PSTN 26 PCM timing (column 4, line 31 - column 5, line 24). The different stratum are associated with different clock accuracies where the absolute frequency tolerances with respect to synchronization for the stratum 1, 2 and 3E clocks are +/-0.05 ppm, +/-0.5 ppm, and +/-4.6 ppm, respectively (column 5, line 51 - column 6, line 64). Therefore, Lemieux teaches selecting a synchronization clock source according to its stratum, and thus, as a function of its accuracy.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 25-34, 53, and 55-60** are rejected under 35 U.S.C. 102(b) as being anticipated by Lemieux (US 6,256,507).

Regarding **claim 25**, Lemieux discloses a method for time synchronization of a plurality of measuring computers cooperating over a telecommunications network, the method comprising:

providing a plurality of first time sources (GPS Rx 58, LCM 40, Figure 1) associated with a first measuring computer (MSC 14, Figure 1), each of the first time sources having a different respective accuracy and configured to provide a first time stamp (column 1, line 43-column 2, lines 13-14; see also, column 7, lines 52-55 and column 8, lines 10-17); and

selecting, using the first measuring computer, a third time source of the plurality of first time sources as a function of an accuracy of the third time source (column 1, lines 61-65; see also Figure 3).

Regarding **claim 53**, Lemieux discloses a time synchronization device comprising:

a first measuring computer (MSC 14; Figure 1);

a second measuring computer cooperating with the first measuring computer over a telecommunications network (BS 18 or other MSC 14; Figure 1); and

a plurality of first time sources (GPS Rx 58, LCM 40, Figure 1) associated with a first measuring computer (MSC 14, Figure 1), each of the first time sources having a different respective accuracy and configured to provide a first time stamp (column 1, line 43-column 2, lines 13-14; see also, column 7, lines 52-55 and column 8, lines 10-17);

wherein the first computer is configured to select a third time source of the plurality of first time sources as a function of an accuracy of the third time source (column 1, lines 61-65; see also Figure 3).

Regarding **claims 26 and 55**, Lemieux discloses everything claimed as applied to claim 25 and 53 above, and further disclose the telecommunications network includes at least one of an internet and an intranet (column 3, lines 17-23 and 38-42; see also Figure 1).

Regarding **claim 27 and 56**, Lemieux discloses everything claimed as applied to claim 25 above, and further discloses performing a measurement method using the first time stamp (column 8, lines 10-17, providing timing reference information)

Regarding **claim 28 and 57**, Lemieux discloses everything claimed as applied to claim 25 above, and further discloses the third time source is more accurate than at least one other of the plurality of first time sources (local clock module 42, column 6, lines 1-8, 15-19, and 48-52; see also Figure 3).

Regarding **claim 29 and 58**, Lemieux discloses everything claimed as applied to claim 25 above, and further discloses the third time source (local clock, column 1, line 64) has a next best accuracy relative to a fourth time source (GPS primary reference source, column 1, lines 43-62) of the plurality of first time sources, and further comprising attempting, using the first measuring computer (column 1, lines 61-67), to initially select the fourth time source before the selecting the third time source, the selecting the third time source including automatically selecting the third time source when the fourth time source has failed (steps 70-82, Figure 3).

Regarding **claim 30 and 59**, Lemieux discloses everything claimed as applied to claim 25 above, and further discloses the third time source includes signals of a satellite system (GPS

primary reference source, column 1, lines 43-60), the third time source being more accurate than any other of the plurality of first time sources (GPS receiver supplied stratum 1 classified clock, column 5, lines 39-65; local clock modules generate stratum 2 classified clocks, column 6, lines 5-19).

Regarding **claim 31 and 60**, Lemieux discloses everything claimed as applied to claim 30 above, and further discloses the satellite system includes a global positioning system (column 1, lines 43-46; see also Figure 1).

Regarding **claim 32**, Lemieux discloses everything claimed as applied to claim 30 above, and further discloses the first measuring computer includes a local global positioning system receiver integrated therein and configured to received the signals of the satellite system (GPS receiver 54, Figure 1, column 4, lines 8-24; it is inherent that the GPS receiver obtains the clock pulse from the signals from the satellite system).

Regarding **claim 33**, Lemieux discloses everything claimed as applied to claim 25 above, and further discloses each of the measuring computers (MSCs and base stations BS, Figure 1) includes a respective local clock (LCM 40, Figure 1) continuously synchronized to a respective local GPS receiver (GPS Rx 54, Figure 1) via a network time protocol so as to provide a respective internally synchronized local clock (column 1, lines 46-56).

Regarding **claim 34**, Lemieux discloses everything claimed as applied to claim 33 above, and further discloses a fourth of the plurality of first time sources includes signals of a satellite system (GSP Rx 54), and the third time source includes the internally synchronized local clock of the first measuring computer (LCM 40 and CD 44, Figure 1, column 3, lines 46-58), the third

time source having a next highest accuracy relative to the fourth time source (first mode, column 5, lines 52-57; and second mode, column 6, lines 15-19; see also Figure 3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 40, 41, 43 and 45** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemieux (US 6,256,507) in view of Read et al. (US 6,236,623).

Regarding **claim 40**, Lemieux discloses everything claimed as applied to claim 25 above, but fail to expressly disclose wherein the first measuring computer includes a first local clock, the first time source including the first local clock, the first local clock being unsynchronized, the unsynchronized first local clock having a fourth highest accuracy relative to other time sources of the plurality of first time sources.

Nevertheless, Lemieux discloses selecting alternate timing sources when other more accurate clocks are unavailable or degrade in quality (Figure 3). Furthermore, Lemieux teaches first (GPS), second (local clock module), and third (PCM) modes of operation in which decreasingly accurate primary reference sources are chosen depending on the availability, where the most accurate primary reference source that is available is selected. The absolute frequency tolerances of each of the modes is 0.05 parts per million (ppm), 0.5 ppm, and 4.6 ppm.

Read et al. teaches clock circuitry 18 that maintains accuracy of 100 milliseconds during times of GPS outages (Figure 1; column 9, lines 26-42).

Because both Lemieux and Read et al. teach methods of synchronizing clocks in a plurality of devices connected by a communication channel and contingencies for when GPS or other more accurate clocks are unavailable, it would have been obvious to one of ordinary skill in the art to substitute one alternate clock scheme for the other for the obvious result of selecting an alternate clock scheme when more accurate timing sources are otherwise unavailable. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide using the unsynchronized clocks as taught by Read et al., since it provides another operating mode thereby offering more redundancy.

Regarding **claim 41**, Lemieux discloses everything claimed as applied to claim 25 above, but fail to expressly disclose transmitting measurement packets between the first measuring computer and a second measuring computer of the plurality of measuring computers.

Nevertheless, Lemieux does teach communications links between the mobile switching centers and the base stations (column 3, lines 17-42; see also Figure 1).

Read et al. disclose periodically interrogating and monitoring the responses of each of the slave control devices, the master control device determines the delays to each of the slave control devices. In conjunction with this data, the master control device can then interpret and/or adjust any event times reported by event recorders to improve the relative time accuracy of the event recorders as compared to a time maintained by the master control device (column 2, lines 3-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Lemieux with the interrogating and monitoring steps taught by Read et al. since it improves timing accuracy between the base stations (slave event recorders) and mobile switching centers (master control device).

Regarding **claim 43**, Lemieux discloses everything claimed as applied to claim 41 above, and further discloses wherein the first measuring computer acts as a sender and the second measuring computer acts as a receiver (column 3, lines 49-67, Figure 1).

Regarding **claim 45**, Lemieux and Read et al. disclose everything claimed as applied to claim 41 above, but fail to expressly disclose transmitting a sequence number to the second measuring computer with the outgoing measurement packet.

However, it would have been an obvious matter of design choice to transmit a sequence number with outgoing measurement packets, since applicant has not disclosed that this difference solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with or without the sequence numbers.

6. **Claims 52 and 54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemieux (US 6,256,507) in view of Berthaud (US 6,157,957).

Regarding **claim 52**, Lemieux discloses everything claimed as applied to claim 25 above, and further discloses providing a plurality of second time sources associated with a second measuring computer of the plurality of measuring computers, each of the second time sources having a different respective accuracy (other MSC 14 or BS 18, each with GPS Rx, LCM, and CD; see Figure 1).

Lemieux fails to expressly disclose each of the second time sources configured to provide a second time stamp.

Nevertheless, Lemieux does teach each of the mobile switching centers has pooled transcoders 120, that provide time stamping. Lemieux also teaches using time stamping data communications information passed through the mobile switching center, and provides timing

reference information related to coordinating time synch which may not be identical (column 8, lines 10-17, Figure 6).

Berthaud teaches a system in which an exchange of messages between a slave and its master where time stamps are recorded and contained in messages sent and received between the slave and master in order to determine timing reference information (delay) (column 5, line 57-column 6, line 17; see also Figures 3, 4 and Equation (2)). Thus, the host records a receive time stamp is adds it into the poll message as data to be sent back to the slave.

Because both the combination of Lemieux and Berthaud teach time stamping methods for determining timing reference information, it would have been obvious to one of ordinary skill in the art to substitute one method for the other to achieve the predictable result of sending and receiving measurement packets with time stamp data between host and slave devices.

Regarding **claim 54**, Lemieux discloses everything claimed as applied to claim 53 above, and further disclose a plurality of second time sources associated with the second measuring computer, each of the second time sources having a different respective accuracy (other MSC 14 or BS 18, each with GPS Rx, LCM, and CD; see Figure 1).

Lemieux fails to expressly disclose each of the second time sources configured to provide a second time stamp.

Nevertheless, Lemieux does teach each of the mobile switching centers has pooled transcoders 120, that provide time stamping. Lemieux also teaches using time stamping data communications information passed through the mobile switching center, and provides timing reference information related to coordinating time synch which may not be identical (column 8, lines 10-17, Figure 6).

Berthaud teaches a system in which an exchange of messages between a slave and its master where time stamps are recorded and contained in messages sent and received between the slave and master in order to determine timing reference information (delay) (column 5, line 57-column 6, line 17; see also Figures 3, 4 and Equation (2)). Thus, the host records a receive time stamp is adds it into the poll message as data to be sent back to the slave.

Because both the combination of Lemieux and Berthaud teach time stamping methods for determining timing reference information, it would have been obvious to one of ordinary skill in the art to substitute one method for the other to achieve the predictable result of sending and receiving measurement packets with time stamp data between host and slave devices.

7. **Claims 44, 46-49, and 51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemieux (US 6,256,507) in view of Read et al. (US 6,236,623) as applied to claim 41 above, and further in view of Berthaud (US 6,157,957).

Regarding **claim 44**, Lemieux discloses everything claimed as applied to claim 41 above, but fails to expressly disclose using the first measuring computer:

recording the first time stamp, the first time stamp being a send time stamp of an outgoing measurement packet;

generating first data associated with the send time stamp; and

transmitting the data to the second measuring computer with the outgoing measurement packet.

Nevertheless, Lemieux teaches using time stamping data communications information passed through the mobile switching center, and provides timing reference information related to coordinating time synch which may not be identical (column 8, lines 10-17, Figure 6).

Berthaud teaches a system in which an exchange of messages between a slave and its master where time stamps are recorded and contained in messages sent and received between the slave and master in order to determine timing reference information (delay) (column 5, line 57-column 6, line 17; see also Figures 3, 4 and Equation (2)).

Because both the combination of Lemieux and Read et al. and Berthaud teach time stamping methods for determining timing reference information, it would have been obvious to one of ordinary skill in the art to substitute one method for the other to achieve the predictable result of sending measurement packets between two computers to determine a delay.

Regarding **claim 46**, the combination of Lemieux and Read et al. discloses everything claimed as applied to claim 44, but fail to expressly disclose first data relates to information about at least one of the third time source, a type of synchronization, an accuracy of the synchronization, and an accuracy of the send time stamp.

Berthaud teaches the time stamps contained in the messages between the slave and host are used to calculate an uncertainty value associated with a calculated master local time to which the slave local time is being synchronized (column 6, lines 14-63).

Because both the combination of Lemieux and Read et al. and Berthaud teach time stamping methods for determining timing reference information, it would have been obvious to one of ordinary skill in the art to substitute one method for the other to achieve the predictable result of sending measurement packets containing time stamps in order to obtain timing reference information.

Regarding **claim 47**, the combination of Lemieux and Read et al. discloses everything claimed as applied to claim 44 above, but fail to expressly disclose generating, with the second

measuring computer, a receive time stamp of an incoming measurement packet and second data associated with the receive time stamp.

Nevertheless, Lemieux teaches using time stamping data communications information passed through the mobile switching center, and provides timing reference information related to coordinating time synch which may not be identical (column 8, lines 10-17, Figure 6).

Berthaud teaches a system in which an exchange of messages between a slave and its master where time stamps are recorded and contained in messages sent and received between the slave and master in order to determine timing reference information (delay) (column 5, line 57-column 6, line 17; see also Figures 3, 4 and Equation (2)). Thus, the host records a receive time stamp is adds it into the poll message as data to be sent back to the slave.

Because both the combination of Lemieux and Read et al. and Berthaud teach time stamping methods for determining timing reference information, it would have been obvious to one of ordinary skill in the art to substitute one method for the other to achieve the predictable result of sending measurement packets with time stamp data between host and slave devices.

Regarding **claim 48**, the combination of Lemieux and Read et al. discloses everything claimed as applied to claim 47, but fail to expressly disclose the data associated with the receive time stamp relates to information about at least one of the third time source, a type of synchronization, an accuracy of the synchronization, and an accuracy of the receive time stamp.

Berthaud teaches the time stamps contained in the messages between the slave and host are used to calculate an uncertainty value associated with a calculated master local time to which the slave local time is being synchronized (column 6, lines 14-63).

Because both the combination of Lemieux and Read et al. and Berthaud teach time stamping methods for determining timing reference information, it would have been obvious to one of ordinary skill in the art to substitute one method for the other to achieve the predictable result of sending measurement packets containing time stamps in order to obtain timing reference information such as uncertainty.

Regarding **claims 49 and 51**, Lemieux and Read et al. disclose everything claimed as applied to claim 41 above, but fail to expressly disclose generating first data associated with the first time stamp, the first time stamp being a send time stamp;

generating second data associated with a receive time stamp; and

assigning the first data and the second data to a predetermined evaluation.

Nevertheless, Lemieux teaches using time stamping data communications information passed through the mobile switching center, and provides timing reference information related to coordinating time synch which may not be identical (column 8, lines 10-17, Figure 6).

Berthaud teaches a system in which an exchange of messages between a slave and its master with each time stamps are recorded and contained in messages sent and received between the slave and master in order to determine timing reference information (delay) (column 5, line 57-column 6, line 17; see also Figures 3, 4 and Equation (2)). Thus, the host records a receive time stamp is adds it into the poll message as data to be sent back to the slave. Furthermore, all the time stamps in the packet are used to generate a triplet of timing information (column 6, lines 42-63).

Because both the combination of Lemieux and Read et al. and Berthaud teach time stamping methods for determining timing reference information, it would have been obvious to

one of ordinary skill in the art to substitute one method for the other to achieve the predictable result of sending measurement packets with time stamp data between host and slave devices to generate timing information.

8. **Claim 42** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemieux (US 6,256,507) in view of Read et al. (US Patent 6,236,623) as applied to claim 25 above, and further in view of Mills (Non Patent Literature, cited in IDS, hereinafter Mills-I).

Regarding **claim 42**, Lemieux discloses everything claimed as applied to claim 25 above, but fail to expressly disclose the measurement packets include user datagram protocol packets.

Mills-I disclose a Network Time Protocol (NTP) built on user datagram protocol (UDP), which provides a connectionless transport mechanism.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to specify the measurement packets taught by the combination of Lemieux and Read et al. to be user datagram protocol packets since UDP is faster and more efficient by avoiding a need for circuit management, duplicate detection or retransmission facilities (page 3, column 2).

9. **Claims 35-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemieux (US 6,256,507) as applied to claim 25 above, and further in view of Mills (Non-patent Literature, cited in IDS, hereinafter Mills-II).

Regarding **claim 35**, Lemieux discloses everything claimed as applied to claim 25 above, and further disclose wherein the first measuring computer includes a first local global positioning system receiver and first local clock (MSC 14 with GPS Rx 54, LCM 40, Figure 1), and further comprising, when no signal of a global positioning system is present at the first local global

positioning system receiver, synchronizing the network to a second local clock of at least one predetermined second measuring computer of the plurality of measuring computers so as to provide an external synchronization (column 3, line 59-column 4, line 7; it is implicit that the bi-directional links 50 between clock distribution systems (CD 44) of mobile switching centers 14 are used to provide timing information from one mobile switching center to another).

However, Lemieux fails to expressly synchronizing the first local clock via a network time protocol to a second local clock of at least one predetermined second measuring computer of the plurality of measuring computers after a predetermined time interval so as to provide an external synchronization.

Mills-II disclose an algorithm for Network Time Protocol (NTP) engineered to discipline a computer clock to a source of standard time, such as a GPS receiver or another computer synchronized to such a source (Page 1, Abstract). Mills-II also discloses at designated intervals, a client sends a request to each in a set of configured servers and expects response at some later time (page 1, column 2 – page 2, column 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to provide Lemieux with the NTP algorithm and interval requests taught by Mills-II since they improve timing accuracy by mitigating among multiple servers provides the most accurate and reliable time (page 1, column 2) and provides for time correction (page 2, column 1).

Regarding **claim 36**, Lemieux discloses the claimed invention except for the time interval is adjustable. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the predetermined time interval adjustable , since it has been held

that the provision of adjustability, where needed, involves only routine skill in the art. In re Stevens, 101 USPQ 284 (CCPA 1954).

Regarding **claim 37**, Lemieux discloses everything claimed as applied to claim 35 above, disclose wherein the second local clock has a second highest accuracy relative to an accuracy of other time sources of the plurality of first time sources (column 1, lines 43-60; this is implicitly taught since the GPS receiver would provide the most accurate clock, and providing GPS receivers to remote base stations for use in training local clocks serves as an enhancement, as opposed to a centralized PRS radiating out sync info to network nodes, which would be the next accurate).

Regarding **claim 38**, Lemieux discloses everything claimed as applied to claim 25 above, and further discloses wherein the first measuring computer includes a first local clock (LCM 40, Figure 1).

However Lemieux fails to expressly disclose synchronizing the first local clock via a network time protocol to a second local clock of at least one predetermined second measuring computer of the plurality of measuring computers after a predetermined time interval so as to externally synchronize the first local clock, the first time source including the externally synchronized first local clock, the externally synchronized first local clock having a third highest accuracy relative to other time sources of the plurality of first time sources.

Nevertheless, Lemieux discloses the local clock module is synchronized to the GPS time provided by the GPS receiver (column 1, lines 43-52, Figure 1).

Mills-II disclose an algorithm for Network Time Protocol (NTP) engineered to discipline a computer clock to a source of standard time, such as a GPS receiver or another computer

synchronized to such a source (Page 1, Abstract). Mills-II also discloses at designated intervals, a client sends a request to each in a set of configured servers and expects response at some later time (page 1, column 2 – page 2, column 1). Since primary servers are independently synchronized to GPS receivers, their clocks have presumed zero time error (page 5, column 2) and computers can be reliably synchronized to better than a millisecond in LANs using network time protocol (page 1, column 1; together these implicitly disclose that the GPS receiver provides the highest accuracy time, followed by clocks synchronized to GPS receivers, and thirdly, those synchronized over a network).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to provide the Lemieux with the NTP algorithm and interval requests taught by Mills-II since they improve timing accuracy by mitigating among multiple servers provides the most accurate and reliable time (page 1, column 2) and provides for time correction (page 2, column 1).

10. **Claim 39** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemieux (US 6,256,507) as applied to claim 25 above, and further in view of Montenegro et al. (cited in IDS).

Regarding **claim 39**, Read discloses everything claimed as applied to claim 25 above, but fails to expressly disclose synchronizing a first local clock of the first measuring computer via a network time protocol and storing a type and an accuracy of the synchronizing.

Montenegro et al. disclose a network device that stores a list identifying plural time service providers accessible over a LAN in order of priority, and which, at predetermined time intervals, determines the highest priority time service provider in the list that is available and selects that time service provider (column 1, lines 43-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the combination of Read et al. and applicants' admitted prior art with the network device taught by Montenegro et al. since it improves both reliability and timing accuracy by ensuring that the highest priority time service provider is used (column 2, lines 4-11).

Allowable Subject Matter

11. **Claim 50** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: The present invention comprises a method for time synchronization of a plurality of measuring computers over a telecommunications network, the method comprising: providing a plurality of time sources of different accuracies, selecting a time source based on its accuracy, transmitting measurement packets between a two measuring computers, generating data associated with send and receive time stamps and assigning the generated data to a predetermined evaluation. The closest prior art, Lemieux (US 6,256,507), Read et al. (US 6,236,623), and Berthaud (US 6,157,957), disclose a similar system that transmit timing information between mobile switching centers and base stations, each equipped with a variety of timing sources (GPS Rx, LCM, a clock distribution), that using time stamping to determine timing reference information by calculating local times from the time stamps recorded and contained in polling messages sent between master and slave units. However, the closest prior art fails to disclose the step of stopping a

considering of the first and second data when a respective quality of the first and second data falls below a predetermined level. This limitation distinguishes claim 50 over the prior art.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID HUANG whose telephone number is (571)270-1798. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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